2000 Air Quality Highlights

Ground-Level Ozone in St. Louis

Although summer 2000 had more days when weather conditions were favorable to the formation of ground-level **ozone** than in 1999, the St. Louis **ozone nonattainment** area had fewer days when **ozone** actually reached these high levels. In the entire 2000 **ozone** season, only one **ozone exceedance** occurred in the St. Louis area. This reflects a dramatic improvement in St. Louis air quality since monitoring began in 1978, when 126 **exceedances** were reported!

The photographs at the right show St. Louis on both good and bad air quality days. These pictures were taken by a camera maintained by the Missouri Department of Natural Resources' Environmental Sevices Program (ESP) from the top of the Hill district in St. Louis. Current photographs are available on the department's Web site at www.dnr.state.mo.us/deq/esp/esp_aqm.htm.

Though visual air pollution is not a direct measure of specific air pollutants, it can give the viewer an indication of the air quality. When weather conditions are favorable to the formation of **ozone**, they are often also favorable to the formation of other pollutants that limit visibility.

St. Louis has implemented several control strategies in recent years to reduce ground-level **ozone**, including use of a cleaner-burning **reformulated gasoline**. Through another program, Stage II vapor recovery, special nozzles have been placed on all area gasoline pumps to catch fumes during re-fueling. The St. Louis community also recently launched a new vehicle emissions inspection program, which is described in greater detail at right.

The department's Air Pollution Control Program would like to thank the many St. Louis area residents who made voluntary choices to help reduce **ozone**, such as carpooling, waiting to fill their cars up until after 5:30 p.m. on poor air quality days, taking the bus and avoiding use of charcoal lighter fluid. For more information regarding ground-level **ozone** in St. Louis, see Page 6.

Gateway Clean Air Program

The 2000 launch of the Gateway Clean Air Program headlined Missouri's efforts to bring St. Louis into **attainment** with the U.S. Environmental Protection Agency's (EPA) **ozone** regulations. The new program tests vehicles in the city of St. Louis and St. Louis, St. Charles and Jefferson counties using a new enhanced emissions testing procedure. For the first time, Franklin County also began vehicle emissions testing in 2000, using an improved basic idle emissions test.

The Department of Natural Resources contracted with Environmental Systems Products Inc. (ESP Missouri) to implement the Gateway Clean Air Program. ESP Missouri constructed and operates the new vehicle emissions testing facilities. The new facilities began testing vehicles in April 2000. ESP Missouri also operates RapidScreen, which uses remote sensing devices to monitor exhaust emissions while vehicles are driven on roads and highways. RapidScreen enables the very cleanest-running vehicles to pass the new emissions test without visiting emissions testing stations. More information on the Gateway Clean Air Program is available in the special Gateway Clean Air Program section on Page 6.

Fuels

The Missouri Department of Natural Resources continues to develop ways for St. Louis and Kansas City to reduce emissions of volatile organic compounds (VOCs) that contribute to the formation of ground-level **ozone** (smog). St. Louis is required to reduce VOCs due to its status as an **ozone nonattainment** area, while the Kansas City reductions are in response to violations of the federal health-based **ozone** standard in 1995 and 1997.

Stage II Vapor Recovery has been shown to be one of the most effective means of reducing **ozone** violations. The Missouri Department of Natural Resources has developed the Missouri Performance Evaluation Test Procedures (MOPETP) to ensure that the Stage I and II vapor recovery equipment used in the St. Louis **ozone nonattainment** area are at least 95 percent efficient. The MOPETP is a comprehensive set of tests designed to determine the efficiency of gasoline vapor recovery systems and components.

As of Jan. 1, 2001, only MOPETP-approved systems and components are authorized for use in the St. Louis **ozone nonattainment** area. In addition to reducing the release of pollutants that contribute to the formation of **ozone**, these nozzles also capture air toxins that customers would be exposed to during refueling.

The permitting process is designed to ensure that vapor recovery equipment continues to function properly after being installed. To date, all gasoline dispensing facilities in the St. Louis **ozone nonattainment** area have applied for and received an initial operating permit. Facilities must pass operating permit tests prior to receiving a renewed operating permit. Operating permits are renewed for a five-year period.

Federal **reformulated gasoline (RFG)** has been required at retail gasoline stations in the St. Louis **ozone nonattainment** area since June 1, 1999. Federal **RFG** is a gasoline formula designed to burn cleaner by adjusting the amount of various components already found in conventional gasoline. **RFG** is required all year, not just during the summer. It reduces exhaust emissions as well as evaporative emissions and is administered and enforced by the U.S. EPA. Phase II of the **RFG** program, which began Jan. 1, 2000, requires additional emission reductions compared to Phase I **RFG**. Phase II **RFG** requires a minimum of 25 percent VOC reductions, a 20 percent reduction in air toxics, and a 5 to 7 percent reduction in **NO_x** emissions. Ethanol use in the St. Louis area has increased since the introduction of federal **RFG**. During the winter season, as much as 35 to 40 percent of St. Louis area **RFG** is blended with ethanol.

In 2000, low Reid Vapor Pressure (RVP) gasoline continued to be used during the summer months in the Kansas City **ozone** maintenance area. During summer months, low RVP gasoline evaporates less than conventional gasoline, which reduces emissions of VOCs. Low RVP gas was first required in St. Louis in 1994 and in Kansas City in 1997.

On Jan. 4, 2000, the use of federal **RFG** in Kansas City was blocked by a U.S. Court of Appeals decision to revoke the U.S. EPA's rulemaking that allowed former **ozone nonattainment** areas, such as Kansas City, to opt-in to the federal **RFG** program. As a result of the court decision, an amendment to lower the Kansas City summer RVP requirement from 7.2 pounds per square inch (psi) to 7.0 psi beginning June 1, 2001, was proposed in late 2000. The 7.0 psi RVP requirement is one of several emission control measures necessary for Kansas City to maintain compliance with the national **ozone** standard.

Ozone Transport

Because air pollution can spread across geographic boundaries, initiatives involving regional cooperation and study of air quality are becoming more common. In October 1998, the

U.S. EPA issued a rule, known as the Oxides of Nitrogen **(NO_x) State Implementation Plan (SIP)** Call. This **NO_x SIP** Call would have required Missouri to reduce emissions of **NO_x**, a commonly transported air pollutant that contributes to **ozone** formation.

After several legal challenges, the U.S. EPA's **NO_x SIP** Call is only effective for 19 of the 22 originally named states, excluding Missouri, Georgia and Wisconsin. The U.S. EPA's modeling showed that Missouri contributes to **ozone** problems in Illinois, Indiana, Michigan and Wisconsin. On Aug. 30, 2000, the U.S. Court of Appeals for the D.C. Circuit agreed with an industry's group motion to extend the deadline for implementation of the **NO_x SIPs** for the 19 states affected by the **SIP** call. The deadline has been moved from May 1, 2003, to May 31, 2004.

The U.S. EPA intends to propose a **NO_x SIP** Call to include part of Missouri in early 2001, requiring Missouri to submit a revised state air quality plan. This rulemaking will provide some additional answers about implementation dates for Missouri's sources as well as any additional **NO_x** regulations that will be required. Missouri's statewide **NO_x** rule, adopted by the **Missouri Air Conservation Commission** May 25, 2000, is intended to improve air quality in the St. Louis **ozone nonattainment** area. Missouri's statewide **NO_x** rule, 10 CSR 10-6.350, will reduce the emissions of **NO_x** from electric generating units and establish a **NO_x** emissions trading program for the entire state of Missouri.

The state of Missouri anticipates that the U.S. EPA will publish a **NO_x SIP** Call in the first quarter of calendar year 2001. At that point Missouri will need to evaluate the current statewide **NO_x** regulation and the **NO_x SIP** Call to determine what Missouri's response will be.

Cooperative Development of Regulations

Involving the public in the process of making air quality rules helps to create fair, effective regulations that have broad support. In 2000, the Missouri Department of Natural Resources continued its commitment to public participation by convening workgroups to help develop air regulations. A workgroup brings industry, the public, and government agencies together to share concerns and exchange ideas and data while developing regulations.

The department continued to implement the recommendations of the Construction Permit Streamlining Workgroup. The recommendations improve the Construction Permit Regulations and the internal procedures and policy for the program to review permit applications. The department has committed to reconvening this workgroup in 2001.

The department also worked with leaders from industry, environmental organizations and local governments to improve air quality in the Kansas City area. The department participated as a member of the Mid-America Regional Council, a metropolitan planning organization, in the development of an air quality improvement plan for the Kansas City **ozone** maintenance area which includes Johnson and Wyandotte counties in Kansas and Clay, Jackson and Platte counties in Missouri.

The department actively participates in air quality meetings of the two major metropolitan planning organizations, East-West Gateway Coordinating Council in St. Louis and Mid-America Regional Council. At these public meetings, the department provides updates on air quality projects and discusses proposed rules and plans with other participants.

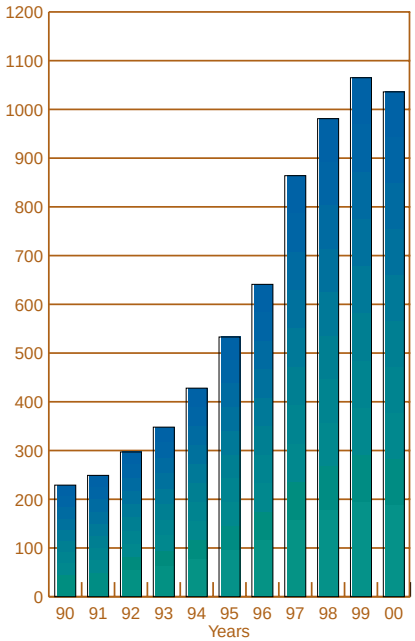
Operating Permits

In 2000, declining staff numbers slowed the Operating Permit Unit's progress toward getting all the initial Part 70 State Installation Operating Permits issued. Progress was made, however, and the unit's operating permit status at year's end was that 354 Part 70 Operating Permits, or 78 percent, had completed technical and peer review, had been issued or were closed out. Permits that had undergone technical and peer review will still need to be reviewed by the public and the U.S. EPA. This process normally can be completed in two to three months, although objections received by the Air Pollution Control Program can slow this process.

Construction Permits

Among the 1,036 construction permit actions made in 2000, notable major level construction permits were issued for: University of Missouri-Columbia Power Plant; Duke Energy-Bollinger, LLC; Duke Energy-Audrain; Silgan Containers Manufacturing Corp; and Silgan Containers Manufacturing Corp.

Construction Permit Projects Completed by Air Pollution Control Program 1990-2000



Enforcement Actions and Results

The department's Air Pollution Control Program performed 1,686 stationary source inspections in the 2000 calendar year. The department's program also issued 1,020 Notices of Violation (NOVs) in 2000. Settlements were reached in 146 cases. These settlements resulted in paid penalties of $309, 760 and suspended penalties totaling $262,400. The department referred 20 cases to the attorney general's office.

Asbestos

Federal regulations require that all buildings must be inspected for the presence of asbestos-containing materials (ACM) before they are renovated or demolished. The inspection must be conducted by a Missouri-certified inspector. In most cases ACM must be removed before beginning renovation or demolition.

Owners or contractors of demolition or renovation operations must submit a notice of intent to demolish or renovate a structure to the department's Air Pollution Control Program 10 working days prior to start of operation for review and approval. Single family homes of four or fewer dwelling units are not subject to the regulations. However, when more than one residential structure is involved on the same city block per one-year period, or if the residential structure will be used for fire training, the regulations apply.

The Small Business Compliance Advisory Committee

Small businesses are often focused on their day-to-day operations and may find it difficult to keep up with changing air pollution regulations and requirements. Section 507 of the 1990 Federal Clean Air Act Amendments recognized this and required states to develop a three-component assistance program to help. The three components are a small business ombudsman, a technical assistance program for small businesses and a compliance advisory panel. In Missouri, the compliance advisory panel is known as the Small Business Compliance Advisory Committee.

The Small Business Compliance Advisory Committee is composed of seven members. Two are appointed by the governor, one each is appointed by the majority and minority leaders of the Missouri House and Senate, and one is appointed by the director of the Missouri Department of Natural Resources. The committee has the following responsibilities:

- Receive reports from the small business ombudsman (governor's office);
- Evaluate the impact on small business of the Air Conservation Law and related regulations;
- Make recommendations to the Missouri Department of Natural Resources, **the Missouri Air Conservation Commission** and the General Assembly regarding changes in procedure, rule or law that would help small businesses comply with the Air Conservation Law;
- Make recommendations to the **Missouri Air Conservation Commission** on rules to expedite the review of modifications for small business; and
- Conduct hearings and make investigations consistent with the purposes of the small business technical assistance activities.

Currently there are five individuals on the committee: Jack Lonsinger, chair, Excelsior Springs; Bruce Morrison, St. Louis; Caroline Pufalt, St. Louis; Joel Braun, Fenton; and Walter Pearson of the Missouri Department of Natural Resources. The committee met four times in 2000 and dealt with a variety of issues from small agricultural incinerators to open burning.

The small business technical assistance activity is performed by the department's Technical Assistance Program, a non-regulatory service of the Missouri Department of Natural Resources. The Technical Assistance Program's business assistance unit carries out the activities and provides administrative support to the Small Business Compliance Advisory Committee. The mission of the department's Technical Assistance Program is to provide information, assistance, education and training to business owners, farmers, local governments and the general public on how to control or reduce pollution. For more information, contact the department's Technical Assistance Program at 1-800-361-4827 or (573) 526-6627.

Number of Missouri Nonattainment Areas Dwindles in 2000

In the last quarter century since the department's Air Pollution Control Program was created, the state has been able to bring several areas into **attainment** with the **National Ambient Air Quality Standards (NAAQS)**. The Kansas City area polluted beyond federal health standards for **ozone** for many years, but in 1992, it was redesignated as an **ozone** maintenance area. The Kansas City area now works hard to maintain this status. Use of cleaner gasoline, along with industrial controls, has helped keep air clean in Kansas City.

The St. Louis area is still struggling to come into compliance with federal health standards for ground-level **ozone**, and has implemented a variety of programs to help make this happen. The Department of Natural Resources is confident that the area will achieve the **ozone** standard, since the St. Louis community has been very successful in resolving other air quality problems. In the past, portions of St. Louis have been in **nonattainment** for **carbon monoxide**, **sulfur dioxide** and particulate matter, but these pollutants have since been controlled, and the area is now in **attainment** for all pollutants except **ozone**. Extensive computer modeling by the department has shown that the area will attain standards for **ozone** by 2003.

Portions of St. Joseph were once designated as a **nonattainment area** for particulate matter, but air in this area has since been restored and now is in compliance with federal standards.

On Dec. 18, 2000, the U.S. EPA announced the redesignation of a **lead nonattainment** area in western Iron County. This area is now considered to be in **attainment** of federal health-based standards for **lead**. Air quality near a **lead smelter** in Buick once exceeded the **NAAQS**. However, Department of Natural Resources staff developed a plan that ultimately brought this area back into compliance with these health standards. Department officials also worked closely with the operator of a different **lead smelter** near Glover, Missouri, to solve air quality problems near the facility. This area has been meeting federal air quality standards since the start of 1997, and there are plans to consider redesignation of this area back to **attainment** soon. Air quality near a third **lead smelter located in** Herculaneum continues to exceed federal health standards. Working closely with the company the department has developed a plan to bring this area into **attainment** as well. The plan calls for the enclosure of buildings and the construction of ventilation and filtration systems. Construction of these controls is scheduled for completion in July 2002.